

In The Claims:

Claim 1. (currently amended) [[A]] An isolated biopolymer marker peptide selected from the group consisting of amino acid residues 2-11 of SEQ ID NO: 1, amino acid residues of 2-12 of SEQ ID NO: 2, and amino acid residues of 2-13 of SEQ ID NO: 3 diagnostic for insulin resistance.

Claims 2-38 (previously canceled)

Claim 39. (Currently amended) A method for diagnosing insulin resistance comprising:

- (a) obtaining a sample from a patient;
- (b) conducting mass spectrometric analysis on said sample in a manner effective to maximize elucidation of discernible analysis of peptide fragments contained therein ; and
- ©) comparing mass spectrum profiles of a peptide selected from the group consisting of amino acid residues 2-11 of SEQ ID NO: 1, amino acid residues 2-12 of SEQ ID NO: 2 and amino acid residues 2-13 of SEQ ID NO: 3 to mass spectrum profiles of peptides elucidated from said sample; wherein recognition of a mass spectrum profile in the sample displaying the characteristic profile of the mass spectrum profile for the peptide consisting of amino acid residues 2-11 of SEQ ID NO:1, amino acid residues 2-12 of SEQ ID NO:2, and amino acid residues 2-13 of SEQ ID NO: 3 is diagnostic

for insulin resistance.

Claim 40. (Previously presented) The method of claim 39, wherein the sample is an unfractionated body fluid or a tissue sample.

Claim 41. (Previously presented) The method of claim 39, wherein said sample is selected from the group consisting of blood, blood products, urine, saliva, cerebrospinal fluid, and lymph.

Claim 42. (Previously presented) The method of claim 39, wherein said mass spectrometric analysis is Surface Enhanced Laser Desorption Ionization (SELDI) mass spectrometry (MS).

Claim 43. (Previously presented) The method of claim 39, wherein said patient is a human.

Claim 44. (Currently amended) ~~An insulin resistance diagnostic kit~~ A kit for determining the presence of an isolated biopolymer marker selected from the group consisting of SEQ ID NO: 1 and SEQ ID NO: 2 and SEQ ID NO: 3 comprising: (a) an isolated biopolymer peptide selected from the group consisting of amino acid residues 2-11 of SEQ ID NO:1, amino acid residues 2-12 of SEQ ID NO: 2 and amino acid residues 2-13 of SEQ ID NO:3 and (b) an

antibody that binds to said isolated biopolymer peptide in a sample from a patient.

Claim 45. (Previously presented) The ~~diagnostic assay~~ kit of claim 44, wherein said antibody is immobilized on a solid support.

Claim 46. (Previously presented) The ~~diagnostic assay~~ kit of claim 44, wherein said antibody is labeled.